



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,901	09/09/2003	Nicholas J. Richardson	02-C-129	3611

7590 02/07/2007
Lisa K. Jorgenson
STMicroelectronics, Inc.
1310 Electronics Drive
Carrollton, TX 75006

EXAMINER

ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
----------	--------------

2162

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/658,901

Applicant(s)

RICHARDSON, NICHOLAS J.

Examiner

Shahid Al Alam

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed December 1, 2006 have been fully considered but they are not persuasive.
2. Applicant's main argument is that Greene does not teach multiple search engines.

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-1]

Interpretation of Claims-Broadest Reasonable Interpretation

During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

With respect to Applicant's argument, Green discloses in column 31, lines 60 – 64, the basic system architectures set forth herein can be expanded to handle such multiple field lookups. Multiple systems can be cascaded, resulting in a multiples field lookup that occurs at the same speed as a single 32-bit operation. Green's teachings of a multiple systems and multiple field lookups, similar to multiple search engine, clearly teach applicant's claimed limitation. Furthermore, Greene's teachings of longest prefix match and masked prefix match clearly teaches applicant's claimed limitation.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 3 – 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application with useful, concrete and tangible result.

A practical application can be either physical transformation or a useful, concrete and **tangible** result.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

The claim receive a search command, determine a longest prefix match, determine an overall longest prefix match and respond to the search command when its determined longest prefix match comprises the overall longest prefix match. What happen when respond to the search command? What is the output?

There is no tangible result for its usefulness to be realized.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 and 3 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,631,419 issued to Spencer Greene.

With respect to claim 1, Greene teaches a method for providing cascaded network packet search engines (column 4, lines 49 – 50), comprising:

receiving a search command at each one of a plurality of network packet search engines, the search command comprising a specific search key (column 1, lines 44 – 55 and column 6, lines 50 – 53);

determining at each one of the network packet search engine a longest prefix match based on the specific search key (column 1, lines 52 – 55 and column 4, lines 49 – 60);

determining at one of the network packet search engines whether its determined longest prefix match comprises an overall longest prefix match among the other determined longest prefix matches of the other network packet search engines (column 4, lines 49 – 60); and

responding to the search command when its determined longest prefix match comprises the overall longest prefix match (column 4, lines 49 – 60).

As to claim 3, responding to the search command comprising actively responding to the search command (column 4, lines 49 – 60).

As to claim 4, responding to the search command comprising passively responding to the search command (column 4, lines 49 – 51).

As to claim 5, storing a mock result when the longest prefix match fails to comprise the overall longest prefix match (column 4, lines 43 – 45).

As to claim 6, the one of the network packet search engines comprising a peripheral network packet search engine, determining whether its determined longest prefix match comprises the overall longest prefix match comprising: receiving longest match input data from an adjacent network packet search engine; comparing the longest match input data to its determined longest prefix match; and determining that its determined longest prefix match is longer than the longest match input data (column 4, lines 43 – 45, column 6, lines 50 – 53 and column 7, lines 28 – 32).

As to claim 7, the one of the network packet search engines comprising a central network packet search engine, determining whether the longest prefix match comprises the overall longest prefix match comprising:

Art Unit: 2162

receiving first longest match input data from a first adjacent network packet search engine and second longest match input data from a second adjacent network packet search engine (column 6, lines 50 – 53);

comparing the first longest match input data to the longest prefix match and the second longest match input data to the longest prefix match (column 8, lines 47 – 50),
and

determining that the longest prefix match is longer than the first longest match input data and longer than the second longest match input data (column 7, lines 18 – column 8, lines 61).

The subject matter of claims 8 – 13, 14 – 16, 17 – 21 and 22 are rejected in the analysis above in claims 1 and 3 – 7 and these claims are rejected on that basis.


Art Unit: 2162

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M. - 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Shahid Al Alam
Primary Examiner
Art Unit 2162

February 4, 2007